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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/700,078

11/03/2003

Brian Michael Bridgewater

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EXAMINER

RONISL VICKERY M

ART UNIT

PAPER NUMBER

1796

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/700,078

**Applicant(s)**

BRIDGEWATER ET AL.

**Examiner**

VICKEY RONESI

**Art Unit**

1796

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 and 10-17 is/are pending in the application.
- 4a) Of the above claim(s) 10-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 15-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.
2. The new grounds of rejection set forth below are necessitated by applicant's amendment filed on 12/21/2007. In particular, claims 16 and 17 are new. Thus, the following action is properly made final.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 16 and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to claim 16, the amount of initiator of 0.08 % based on the dry polymer weight during the first 10 wt % of monomer conversion fails to satisfy the written description requirement of 35 USC 112, first paragraph since there does not appear to be a written description requirement of the amount of 0.8 % in the application as originally filed, *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) and MPEP 2163. Example 1 on page 17 of the specification only provides support for an initial amount 0.078 wt % and not for 0.08 wt % during the first 10 wt % of monomer conversion. Furthermore, the amounts only provide basis for when the monomers are MAA, BA, and MMA.

With respect to claim 17, the amount of initiator of 0.03 % based on the dry polymer weight during the first 10 wt % of monomer conversion fails to satisfy the written description requirement of 35 USC 112, first paragraph since there does not appear to be a written description requirement of the amount of 0.3 % in the application as originally filed, *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) and MPEP 2163. Example 2 on page 18 of the specification only provides support for an initial amount 22.2 wt % during the first 10 wt % of monomer conversion for a polymer prepared with a chain transfer agent (which is absent from claim 17). In claim 17, the amount of initiator present during the first 10 wt % monomer conversion is based on the total amount of initiator and not on the amount of dry polymer weight. Furthermore, the amounts only provide basis for when the monomers are MAA, BA, and MMA.

***Claim Rejections - 35 USC § 102/103***

4. Claims 2-5, 7, and 17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Friel (US 5,731,377, cited on IDS dated 5/20/2004).

With respect to claims 2-5 and 7, the rejection is adequately set forth in paragraph 4 of Office action mailed on 9/25/2007 and is incorporated here by reference.

With respect to new claim 17, the rejection set forth in paragraph 4 of Office action mailed on 9/25/2007 covers new claim 17 given that the newly added limitation compared to claim 2 concerning the amount of initiator during the first 10 % monomer conversion is only part of the product-by-process language.

***Claim Rejections - 35 USC § 103***

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Friel (US 5,731,377, cited on IDS dated 5/20/2004).

The rejection is adequately set forth in paragraph 5 of Office action mailed on 9/25/2007 and is incorporated here by reference.

6. Claims 1, 3-7, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friel (US 5,731,377, cited on IDS dated 5/20/2004) in view of Ishikawa (US 4,325,856).

With respect to claims 1 and 3-7, the rejection is adequately set forth in paragraph 6 of Office action mailed on 9/25/2007 and is incorporated here by reference.

With respect to new claim 16, the rejection set forth in paragraph 6 of Office action mailed on 9/25/2007 covers new claim 16 given that the newly added limitation compared to claim 1 concerning the amount of initiator during the first 10 % monomer conversion is only part of the product-by-process language.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Friel (US 5,731,377, cited on IDS dated 5/20/2004) in view of Ishikawa (US 4,325,856) and further in view of Bricker (US 5,502,089).

The rejection is adequately set forth in paragraph 7 of Office action mailed on 9/25/2007 and is incorporated here by reference.

***Response to Arguments***

8. Applicant's arguments filed 12/21/2007 have been fully considered but they are not persuasive. Specifically, applicant argues that the declaration filed under 37 CFR 1.132 on 12/21/2007 establishes criticality for the process in the instant product-by-process claims.

In response to the argument, it is first noted that the data in Appendix A of the declaration filed on 12/21/2007 is not clear given that the black curves in each figure are not clearly labeled. Clarification is suggested.

It is noted that applicant's evidence in the declaration that Friel's Example 3 does not exhibit more than one elution time (Examples AH0301 and AH303) cannot be relied upon to establish criticality for the presently claimed process. Case law holds that "applicant must look to the whole reference for what it teaches. Applicant cannot merely rely on the examples and argue that the reference did not teach others." *In re Courtright*, 377 F.2d 647, 153 USPQ 735,739 (CCPA 1967).

The inventive and comparative data of the declaration and specification have been fully considered and are found to not be reasonably commensurate in scope with the claimed invention. Case law holds that evidence is insufficient to rebut a *prima facie* case if not commensurate in scope with the claimed invention. *In re Grasselli*, 713 F.2d 731, 741, 218 USPQ 769, 777 (Fed. Cir. 1983). In particular, only one type of acrylic emulsion polymer, initiator, and neutralizer are exemplified. Case law holds that evidence of superior properties in one species is insufficient to establish the nonobviousness of a subgenus containing hundreds of compounds. *In re Greenfield*, 571 F.2d 1185, 1189, 197 USPQ 227, 230 (CCPA 1978). Furthermore, the ranges of amounts of initiator (ammonium persulfate) and neutralizer (sodium

carbonate) used in examples both at the beginning and during polymerization are not reasonably commensurate in scope with the presently claimed process ranges. See the Tables below. Case law holds that whether the unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, the “objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support.” In other words, the showing of unexpected results must be reviewed to see if the results occur over the entire claimed range (i.e., scope). *In re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980), MPEP 716.02(d).

Given that the amounts of initiator and neutralizer are important in the presently claimed process and further given that applicant has not shown that improved scrub resistance properties (which is arguably due to multiple elution times in GPC-MALS) are had throughout the presently claimed amount ranges, criticality for the entire scope of the presently claimed process on the final product cannot be supported.

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Table 1: Comparison of Claim 1 to inventive and comparative data of the specification as originally filed.

	Emulsion	Total Initiator (wt % based on polymer)	Initiator, first 10% (wt % based on polymer)	Neutralizer (eq. basis of acid monomer)	Neutralizer, first 25 % (wt % based on total neutralizer)
<i>Claim 1</i>	<i>Any acrylic emulsion</i>	<i>0.3-0.4</i>	<i>open-ended &lt; 0.15</i>	<i>5-75</i>	<i>open-ended &lt; 50</i>
DATA FROM THE SPECIFICATION					
Example 1	MAA/BA/MMA	0.35	0.078	34.5	5
Comp. Ex. A	MAA/BA/MMA	0.35	0.078	34.5	100
Comp. Ex. B	MAA/BA/MMA	0.35	0.272	34.5	100
DATA FROM THE DECLARATION FILED ON 12/21/2007					
AH0331 (comparative)	BA/MMA/MAA/Ureido	0.3	0.18	56	100
AH307 (inventive)	BA/MMA/MAA/Ureido	0.3	0.07	56	2.4

Table 2: Comparison of Claim 2 to inventive and comparative data of the specification as originally filed.

	Emulsion	Total Initiator (wt % based on polymer)	Initiator, first 10% (wt % based on total initiator)	Neutralizer (eq. basis of acid monomer)	Neutralizer, first 25 % (wt % based on total neutralizer)
<i>Claim 2</i>	<i>Any acrylic emulsion</i>	<i>0.05-0.3</i>	<i>open-ended &lt; 50</i>	<i>5-75</i>	<i>open-ended &lt; 50</i>
DATA FROM THE SPECIFICATION					
Example 2	MAA/BA/MMA	0.135	22.2	34.5	5
Comp. Ex. C	MAA/BA/MMA	0.135	22.2	34.5	100
Comp. Ex. D	MAA/BA/MMA	0.135	77.8	34.5	100
DATA FROM THE DECLARATION FILED ON 12/21/2007					
AH0331 (comparative)	BA/MMA/MAA/Ureido	0.3	60.0	56	100
AH307 (inventive)	BA/MMA/MAA/Ureido	0.3	23.3	56	2.4
AH0309 (comparative)	BA/MMA/MAA/Ureido	0.05	60.0	56	100
AH0311 (inventive)	BA/MMA/MAA/Ureido	0.05	20.0	56	0



***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

3/26/2008

Vickey Ronesi

/V. R./

Examiner, Art Unit 1796

/VASUDEVAN S. JAGANNATHAN/

Supervisory Patent Examiner, Art Unit 1796